

# Homogeneous DNA Analysis

U N I V E R S I T Y O F U T A H

## CENTER

The focus of this Center continues to be commercialization of rapid and cost-effective DNA-testing. Their technology is based on the Nobel-prize winning technique, polymerase chain reaction (PCR), which has been modified to be ten times faster. The technology takes advantage of the fact that different types of DNA (from different individuals) melt differently. The Center's technology simplifies the whole analysis by allowing for PCR and typing (DNA melting) to be performed in the same test tube, reducing the cost and risk of contamination.

## TECHNOLOGY

The core technology of this Center is based on high resolution DNA melting. Just as high definition television presents such detail that it is possible to see the pores on a person's face, high resolution DNA melting provides great detail, enabling one to see the smallest difference in DNA, the base. The technology also allows for this analysis in just a few minutes, providing potential in-office clinical applications such as identifying a patient's risk for drug reactions or what microorganism is causing an infection. The process is "real-time" when a fluorescent dye is added, allowing one to watch the DNA as it melts and is amplified.

After successful commercialization of one product, the Center is working to develop advanced methods of homogeneous DNA analysis in addition to software and hardware complimentary technologies. Future developments will include a real-time PCR chip and related instruments.

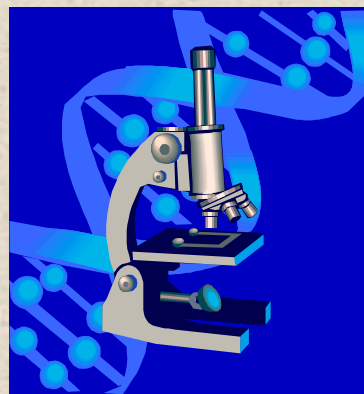
## ACCOMPLISHMENTS

This year, the Center demonstrated the feasibility of sequencing and repeat typing by melting and completed a blind clinical trial of transplant matching. Software tools for assay design and analysis have also been developed which will be available on the Center's website to increase visibility of the technology.

An additional patent has been issued and was licensed to the Center's main benefiting company, Idaho Technology. Additional genotyping and allele fractions technology have also been successfully licensed.

## THINK TANK

What if there was  
a way to...



Find out how a  
patient's body will  
react to a drug in  
just a few  
minutes, right in  
the doctor's office?

Carl Wittwer  
University of Utah  
School of Medicine  
50 N. Medical Drive  
Salt Lake City, UT 84112  
(801) 581-4737  
[carl.wittwer@path.utah.edu](mailto:carl.wittwer@path.utah.edu)